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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,495

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EXAMINER

CRAWFORD, LATANYA N

ART UNIT

PAPER NUMBER

2813

NOTIFICATION DATE

DELIVERY MODE

03/08/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/573,495	Applicant(s) NAITO, KAZUMI	
	Examiner LATANYA CRAWFORD	Art Unit 2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-21, 23 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/3/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the correspondence filed on 1/14/2010. The amendment to the specification was acknowledged and received on 1/14/2010. Currently, claims 5-21, 23-27 are pending. Claims 1-4 & 22 are cancelled.

Drawings

2. The drawings were received on 01/14/2010. These drawings are acceptable.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-21, 23, 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US 2003/0133256 A1).

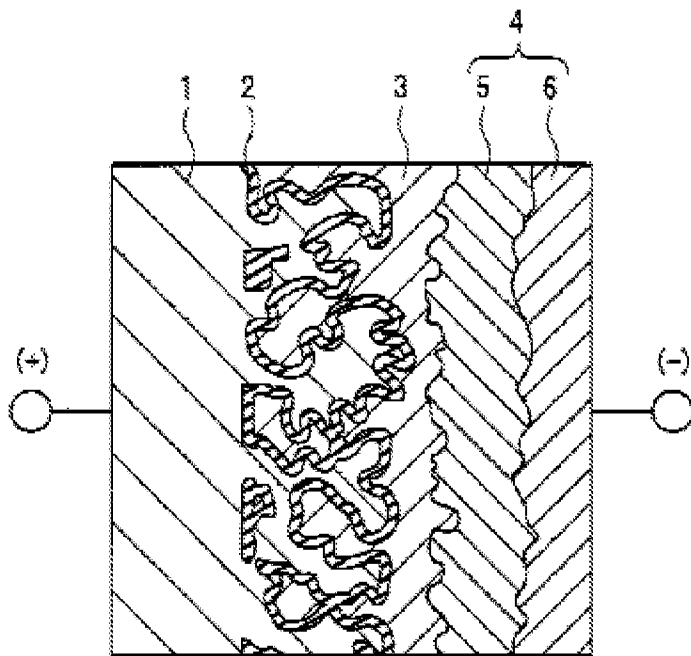


FIG. 1

Regarding claim 20, Yoshida et al. discloses a method for producing a capacitor comprising, as one electrode (1), an electric conductor having formed on the surface thereof a dielectric layer (2) and, as the other part electrode, a semiconductor layer (3) [0038] formed on the electric conductor by energization using the electric conductor as an anode [0035], wherein discrete feather-shaped fine protrusions are formed on a part of but less than the entire surface of the dielectric layer (in view of fig.1) before energization [0056][0072-0074] but is silent to having a width of about 0.1 to about 120 nm and a height of about 0.1 to about 600 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a width of about 0.1 to about 120 nm and a height of about 0.1 to about 600 nm would result since Yoshida et

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al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1), and substantially identical processes, a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 21, Yoshida et al. discloses a method for producing a capacitor comprising, as one electrode, an electric conductor (1) having formed on the surface thereof a dielectric layer (2) and, as the other part electrode, a semiconductor layer (3) [0038] formed on the electric conductor by energization using the electric conductor as the anode [0035], wherein discrete fine protrusions are formed on a part of but less than the entire surface of the dielectric layer (view fig. 1) before energization [0056][0072-0074], said electric conductor having inner pores formed therein, and wherein a majority of the fine protrusions overlay an outer surface of the dielectric layer fig. 1 but fails to teach having a width of 0.1 to 60 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made that having a width of 0.1 to 60 nm would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1), and substantially identical processes, a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 5, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the fine protrusion at least one member selected from a metal oxide [0059].

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Regarding claim 6, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the electric conductor is at least one member selected from a metal [0059].

Regarding claim 7, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the electric conductor (1) is a laminated body having, as the surface layer, at least one member selected from an organic semiconductor and carbon (5/6) [0049] fig. 1

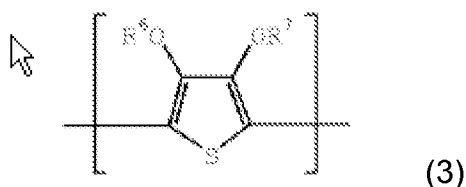
Regarding claim 8, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the dielectric layer mainly comprises at least one member selected from metal oxides such as Ta_2O_5 [0059]

Regarding claim 9, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20 or 21, wherein the semiconductor layer (3) is at least one member selected from an organic semiconductor layer and inorganic semiconductor [0038].

Regarding claim 10, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 9, wherein the organic semiconductor is at least one member selected from an organic semiconductor comprising an organic semiconductor mainly comprising tetracyano-quinodimethane [0038]

Regarding claim 11, Yoshida et al. discloses The method for producing a capacitor as claimed in claim 10, wherein the electrically conducting polymer containing a repeating unit represented by formula (1) is an electrically conducting polymer containing a structure unit represented by the following formula (3) as a repeating unit:

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wherein R6 and R7 each independently represents a hydrogen atom, a linear or branched, saturated or unsaturated alkyl group having from 1 to 6 carbon atoms, or a substituent for forming at least one 5-, 6- or 7-membered saturated hydrocarbon cyclic structure containing two oxygen atoms when the alkyl groups are combined with each other at an arbitrary position, and the cyclic structure includes a structure having a vinylene bond which may be substituted, and a phenylene structure which may be substituted [0004].

Regarding claim 12, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 10, wherein the electrically conducting polymer is selected from polypyrrole [0004].

Regarding claim 13, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 11, wherein the electrically conducting polymer is poly(3,4-ethylenedioxythiophene) [0004].

Regarding claim 14, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 9, wherein the inorganic semiconductor is at least one compound selected manganese dioxide [0038].

Regarding claim 15, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 9, wherein the electrical conductivity of the semiconductor is from 10^{-2} to 10^3 S/cm [0004][0038].

Regarding claim 16, Yoshida et al. discloses a capacitor produced by the production method claimed in claim 20 or 21 (in view of fig. 1).

Regarding claim 17, Yoshida et al teaches a capacitor produced as in claim 16 but is silent to the impregnation ratio of the semiconductor is 85% or more. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the impregnation ratio of the semiconductor is 85% or more would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1), and substantially identical processes (in view of rejection for claim 20 and 21) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 18, Yoshida et al. discloses an electronic circuit using the capacitor claimed in claim 16 (in view of fig. 1) [0002].

Regarding claim 19, Yoshida et al. discloses an electronic device using the capacitor claimed in claim 16 (in view of fig. 1)[0002].

Regarding claim 23, Yoshida et al. discloses a capacitor produced as in claim 21 but is silent to wherein 80% or more of the fine protrusions overlay an outer surface of the dielectric layer. It would have been obvious to one of ordinary skill in the art at the

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time the invention was made that 80% or more of the fine protrusions overlay an outer surface of the dielectric layer would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1), and substantially identical processes (in view of rejection for 21) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 25, Yoshida et al the method for producing a capacitor as claimed in claim 20 or 21, which comprises electrolytically forming the fine protrusions on the dielectric layer (2) [0036] in view of fig. 1.

Regarding claim 26, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 20, wherein the discrete feather-shaped fine protrusions (in view of fig. 1) but is silent to having a width of about 0.1 to about 60 nm and a height of about 0.1 to about 120 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a width of about 0.1 to about 60 nm and a height of about 0.1 to about 120 nm would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1), and substantially identical processes (in view of rejection for claim 20) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Regarding claim 27, Yoshida et al. discloses the method for producing a capacitor as claimed in claim 21, wherein the discrete fine protrusions (in view of fig. 1)

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but is silent to having a width of 0.1 to 30 nm. It would have been obvious to one of ordinary skill in the art at the time the invention was made that a width of 0.1 to 30 nm would result since Yoshida et al. teaches substantially identical structures (in view of recently submitted drawings fig. 5 compared to Yoshida et al. fig. 1), and substantially identical processes (in view of rejection for claim 21) a prima facie case of obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Allowable Subject Matter

5. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LATANYA CRAWFORD whose telephone number is (571)270-3208. The examiner can normally be reached on Monday-Friday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Landau can be reached on (571)-272-1731. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LaTanya Crawford/
Examiner, Art Unit 2813

/W. David Coleman/
Primary Examiner, Art Unit 2823